

METHOD AND APPARATUS FOR TRANSFERRING AND LOADING A  
RETICLE WITH A ROBOTIC RETICLE END-EFFECTOR

ABSTRACT OF THE DISCLOSURE

An apparatus and method of transferring and loading a reticle onto a receiving station (for example, a reticle exposure stage). The reticle is first retrieved from a storage facility with an end effector having an reticle plate coupled to a mounting plate. The mounting plate connects the end effector to a robotic arm. The reticle is aligned in an out-of-plane position in an off-line alignment station. The alignment is in compliance with the alignment requirement at the receiving station. The reticle is mounted onto the reticle plate after undergoing the alignment at the off-line alignment station. The reticle is then transferred from the off-line alignment station to the receiving station while maintaining the previous alignment at the off-line alignment station. The apparatus further provides rigidity of the mounted reticle to ensure compliance with the alignment requirement at the receiving station.